

### ABSTRACT

An electrohydraulic clutch includes a bi-directional electric motor, a hydraulic circuit and a multiple plate friction clutch pack. The bi-directional electric motor drives a ball screw through a gear reduction assembly. The ball screw output translates a master piston of the hydraulic circuit which in turn advances and retracts an annular sleeve piston disposed adjacent the friction clutch pack. Hence, actuation of the electric motor displaces hydraulic fluid and compresses or relaxes the friction clutch pack, thereby transferring or inhibiting torque.